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AUTHOR Meier, James

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ABSTRACT

An analysis of state funding of vocational education in New York State compared funding received by New York City (NYC) to that received by non-city districts participating in Boards of Cooperative Educational Services (BOCES). (Aid to BOCES was started to encourage suburban and rural school districts to participate in cooperative planning of vocational education and in recognition of the higher cost of vocational education programs.) In order to compare NYC vocational education aid to the rest of the state, the analysis was undertaken in two parts: an examination of BOCES expenditures and aid attributable to occupational education; and an examination of NYC expenditures for vocational education, and a computation of the state reimbursement the city would receive if it were aided as a BOCES. It was found that on average the school districts which participate in BOCES receive 71 percent of their approved expenditures in state aid; NYC receives 19 to 20 percent of its comparable expenditures from state aid. If the city received aid under the same formula as non-city districts, it would have received $18.5 million more or an increase of 333 percent over what it received in 1981. Although the 1982 Legislature has increased both BOCES aid and NYC (and other large cities') aid for 1982-83, the increase for NYC is only about half of the amount the BOCES aid increase would have yielded for the city. The study generated a recommendation that a new formula be created for distributing state aid to vocational education that would be more equitable to NYC without forcing it to join BOCES. (KC)

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STATE AID FOR VOCATIONAL EDUCATION:

A STUDY IN INEQUITY

U.S. DEPARTMENT OF EDUCATION
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Project Director: Robin Willner
Project Consultant: James Meier (Author)
Editor: Susan Amlung
Researcher: Chris Niccolls

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Helen C. Heller, Coordinator
95 Madison Avenue
New York, NY 10016
212-685-3563

INTERFACE, Staff
251 Park Avenue South
New York, NY 10010
212-674-2121

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STATE AID
FOR
VOCATIONAL EDUCATION

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I. INTRODUCTION

With the current economic downturn and rising unemployment, especially among young people, the need for effective vocational training in the public secondary schools is becoming more acute. Nevertheless, by any measure, the State aid for New York City vocational education is shockingly low. Moreover, the disparity between vocational education aid for New York City and other school districts is growing.

The Educational Priorities Panel, a citywide coalition of 25 parent and civic organizations in New York City has emphasized the need for occupational and career education. We have encouraged the development of work readiness and skills training programs, especially private-public sector cooperation and on-site experiences. And the city has recognized the need, too, with substantial increases in tax levy contributions to vocational education programs.

Vocational training is a growing priority statewide as well. Total expenditures for secondary level occupational programs are rising much more quickly than total education expenditures: 308 percent from 1969 to 1977 compared to 65 percent for all public education in New York State during the same period (that is, nearly five times faster).[1]

The state has an important role in vocational education funding, as it does in other public school programs. Non-city districts receive aid for vocational education in a special category. This aid originated as an encouragement to suburban and rural school districts to participate in Boards of Cooperative Educational Services (BOCES) and in recognition of the higher cost of vocational education programs.[2] BOCES, in essence,

regional consortia of school districts, were established by the State of New York in 1948 as a temporary mechanism to improve educational opportunities and made permanent regional agencies in 1972 [2]. BOCES enable component school districts to share resources so that they can achieve economies of scale, attain more effective services, and take advantage of services which they themselves do not have the resources to offer. Each of the 44 BOCES in New York State offers occupational education programs. The Big Five Cities are prevented by statute from participating in BOCES because it was thought they had enough students and facilities to support a wide range of program offerings without consolidating. Therefore, they receive what is known as a "Special Services" aid in lieu of BOCES aid.[3]

While there are inequities in other state aid formulas, none is so grossly unjust to New York City as the Special Services Aid for vocational education, when compared to the aid allocated to non-city districts:

- On average, the school districts which participate in BOCES receive 71 percent of their approved expenditures in state aid; New York City receives 19 to 20 percent of its comparable expenditures from state funds.
- If the city received aid under the same formula as non-city districts, it would have received $18.5 million more or an increase of 333 percent over what it received in 1981-82.
- The 1982 Legislature has increased both BOCES aid and Special Services Aid for 1982-83. However, the Special Services Aid increase for New York City (approximately $1.2 million) is, once again, only about half of the amount the BOCES aid increase would have yielded for the city (approximately $2.1 million). The result is an additional disparity of $900,000. [4]

The New York State Education Department distributed approximately $65 million in 1981-82 in state aid for public school vocational education programs.

About $55 million of that go to the almost 700 districts which participate in BOCES. Last year the State Legislature modified the cities' Special Aid formula so state aid to New York City increased from less than $4 million in 1980-1981 to nearly $8 million in 1981-82. However, that represents only about 13 percent of state aid for vocational education, while New York City has almost a third of New York State's total public school students, and 47 percent of total secondary school registrations in approvable occupational education programs in 1980-81.[5]

In recognition of the great need for occupational programs and the shortage of funding, the city last year added $7 million in tax levy funds for vocational education. Nevertheless, city vocational high schools remain overcrowded, with thousands of students failing to find places in programs of their choices. And those that do get in, often work on outdated equipment that is frequently out of repair.

The purpose of this analysis, therefore, was to determine how much state money New York City would receive for its vocational education program if it were aided in the same way as BOCES component districts. In order to compare NYC vocational education aid to the rest of the state the analysis was undertaken in two parts. The first part examines BOCES expenditures and aid attributable to occupational education, and the second part looks at New York City expenditures for vocational education and computes the state reimbursement the city would receive if it were aided as a BOCES.

The analysis demonstrates the extent to which New York City is shortchanged. At present the actual aid represents only 19/20 percent of approvable expenditures, substantially less than the 71 percent of approved expenditures received statewide, and significantly less than even the 36 percent which the very wealthiest (and thus least-aided) non-city districts are entitled to receive under current law.

Despite a doubling of New York City's vocational education aid in 1981-82, this disparity with BOCES aid was not diminished. This is primarily because of a simultaneous adjustment in the BOCES aid formula which raised the aidable salary ceiling from $9,500 to $14,500. Using the old BOCES formula, New York City's aid would have been approximately $21 million, or a difference of $17 million over the old Special Aid funding. For 1981-82, with the new formulas, the difference between actual aid and BOCES-comparable aid to New York City was still $16.5 to $18.5 million.

Furthermore, for next year, the Legislature has raised the salary ceiling once again, this time to $17,000, further exacerbating the discrimination against the cities.

New York City has demonstrated its commitment to vocational education with an increased tax levy allocation. The New York City Board of Education places a high priority on these services, providing a wide range of programs, many of them recognized as models throughout the state and nation. Vocational education in the Big Five Cities is a successful alternative to BOCES programs. However, state funding must be evenhanded for all of our students.

In the interests of equity and the education of the New York City students in vocational programs, it is imperative that occupational aid for the cities be adjusted accordingly. New York City students are entitled to a fair share of state resources.

I. NOTES

1. Legislative Committion on Expenditure Review (LCER), Occupational Education in the Secondary Schools, Program Audit, July 1980, p.39.

Total public high school enrollments in occupational programs in New York State increased from 350,000 in 1971-72 to 451,000 in 1977-78, according to LCER p.5, a 21 percent increase, and dropped to 396,000 in 1978-79, a decrease of 12 percent. Despite the decrease in enrollment the rate of participation of secondary school students in occupational programs is high and appears to be increasing, rising from 33 percent in 1971-72 to 40 percent in 1977-78. In New York City, many students are forced to accept their second or third choice of high school because of space unavailability. In fact, despite the overall decline in student enrollment city wide, all but two of New York City's 21 vocational high schools were overutilized in 1978-9 (ten schools from 25 to 82 percent overutilized). See also, Help Wanted, A Management Study of Public Vocational Education in New York City, Educational Priorities Panel, New York, July 1980. Moreover, the perceived preference of students for voc ed programs can be imputed from the fact that their attendance tends to be better than the overall attendance rate of high school students.

2. BOCES began offering occupational education programs in 1963, facilitated by the passage of the Federal Vocational Education Act. For a more complete background on BOCES history and programmatic services see: (LCER) Boards of Cooperative Educational Services Programs, Program Audit 3.1.76, Albany, New York, June 28, 1976.

3. Also known as "399 aid," because it is provided for in Chapter 399 of the Education Law.

4. Based on preliminary estimates of the state budget approved by the Legislature, March 31, 1982.

5. Percentage of total enrollments based on Public School Enrollment and Staff, New York State 1980-81, NYSED, Information Center on Education, Albany, p.4. Percentage of occupational education students is based on data provided by NYSED, information Center on Education (B.E.D.S.) and includes duplications -- students enrolled in more than one voc ed program. These registration data are limited to agriculture, health, technical and trade programs, the only four which are aided in New York City. (See Appendix B.)

II. BACKGROUND

BOCES

The Boards of Cooperative Educational Services (BOCES) were originally established to increase educational opportunities for rural districts but only as a temporary measure until new intermediate school districts which combined existing districts were formed[1]. No intermediary districts were ever formed and instead the BOCES were granted permanent status in 1972[2]. Now all but 16 of the approximately 700 eligible school districts in New York State have joined BOCES[3]. A 1976 study by the Legislative Commission on Expenditure Review concluded:

> Evolving from the original objective of improving educational opportunity in rural areas, BOCES serve urban areas as well as multi-BOCES regions. In some instances BOCES are the vehicle for achievement of statewide as well as local priorities. The catalyst for cooperative efforts has been the BOCES State Aid formula, reimbursing school districts on average 60 percent of BOCES program and administrative costs.
>
> Because such a high proportion of the costs is paid for by the State, SED approval of programs is required in advance. Virtually all such programs are approved after considerable paper work[4].

Component school districts receive state aid for a portion of all services and expenses which they incur through their participation in a BOCES in addition to regular operating aid for each student. However, with the exception of programs for the handicapped, school districts do not receive additional state aid reimbursements for the same services if they administer them themselves.

Although the exact mix of services varies among BOCES, depending on the needs of component districts, typical services include occupational education, education of handicapped children, computer services, itinerant teachers (specialists such as a school psychologist, remedial reading teacher,

or music teacher who shares his time among two or more school districts), curriculum development, staff development, evaluation, planning, purchasing and other management services. Special education and occupational education are the two largest programs, comprising 27.2 percent and 27.4 percent respectively of total administrative and service expenditures in 1979-80[5].

In recent years BOCES full time enrollment has amounted to only 22,000 to 23,000 students[6], almost all of whom are special education students. This compares to a statewide enrollment of about three million students[7]. BOCES occupational education programs served 55,727 secondary students in 1979-80, dropping very slightly to 55,492 in 1980-81[8]. Most students however attend BOCES only part of the day.

BOCES services are provided to component school districts on a contract basis. School districts, for example, are charged a fixed tuition amount for each occupational education student they send to a BOCES[9]. That tuition rate, however will vary widely among BOCES[10].

BOCES Operating Aid Formula

BOCES do not actually receive state aid. Rather, component school districts are reimbursed through the BOCES based on their portion of prior year BOCES expenditures[11]. There are almost no restrictions placed on BOCES expenditures[12] although there are some limitations on expenditures which the state will consider in computing aid. "Approved" expenditures which provide the base for state aid reimbursement are determined by taking certain deductions from the total: administrative costs in excess of 10 percent of total program costs[13] and salaries above a certain amount are the two primary deductions. Excess salaries have been the main factor limiting the states share of BOCES cost. State aid in 1980-81 was based on an aidable salary limit of $9,500. For 1981-82 aid, however, the limit was increased to

$14,500. Moreover, both the governor and the Regents have proposed increasing the limit still further until it is even with the statewide average teacher salary (now approximately $19,000). In response, this year the Legislature raised the ceiling to $17,000.

Aid is paid in the year following the year in which the expenditure was incurred. Thus, the most current data available for this analysis were 1979-80 expenditures, the basis for 1980-81 aid[14]. Once approved expenditures are established, component school districts have three alternatives in calculating BOCES aid, choosing, of course, the option which produces the greatest amount. One alternative is based on property wealth and utilizes the district's aid ratio, with an average aid ratio of 49 percent and a minimum aid ratio of .36; another alternative known as the 8 mill option, is based on tax effort (the higher the tax rate, the higher the aid); and the third alternative is a save harmless option based on the district's aid in 1967-68. (The formula are described in more detail in Appendix A.)

In sum, no school district's BOCES aid can be lower than 36 percent of approved expenditures. The formula may be viewed as encouraging spending since such a large portion of the cost is returned to districts in aid. Moreover, the formula often favors wealthier districts[15].

Special Services Aid for New York City

New York, along with the other Big Cities, has received Special Services aid since 1974 in lieu of BOCES aid[16] because these cities are not permitted to join in BOCES[17]. Under the formula the state reimburses New York City a certain amount per approved vocational student (See Appendix A for a detailed explanation of the formula). The amount of reimbursement per student is determined by multiplying the city's aid ratio by a maximum allowance. The aid ratio is 20 percent. The maximum allowance has risen from $1400 in 1979

and 1980 to $1650 in 1981. For 1982-83 aid, the Legislature has approved a further increase to $1685 per pupil. The basis for the computation for the aid ratio has also changed. As a result, the aid per student has risen from $182 in 1979 to $289 in 1981 having dropped to $150 in 1980[18].

The approved student count, the other critical factor upon which total aid is based, is derived by multiplying the average daily attendance for all public school students in the city times the number of students in grades 10-12 in certain occupational program areas[19]. New York City probably loses aid to which it is entitled because vocational student attendance tends to be better than the citywide average. The Board of Education must also take care to assure the count includes no duplication of students through dual registrations[20].

As a result of this formula New York City will receive $7,962,281 in aid for 1981-82[21].

II. NOTES

1. LCER, June 28, 1976, p.2.

2. Ibid.

3. NYSED Division of Educational Finance, State-Aided Programs, in interview, February 22, 1982.

4. LCER, June 28, 1976, p. S-16. By 1980-81, the state aid formula had been modified: expenditures for handicapped education reimbursed on a different basis than expenditures for other BOCES services. In 1980-81 total BOCES service expenditures, excluding education of the handicapped were reimbursed an average 46 percent. (Note, debt service for buildings is aided separately from program and administrative costs.)

5. NYSED, Division of Educational Finance, State Aided Programs, exclusive of expenditures for building projects. 1979-80 is the latest year for which BOCES expenditure data was available at the time of this analysis.

6. In Fall, 1980, BOCES full time enrollment was 21,978, down from 22,889 in Fall, 1978, according to Public School Enrollment and Staff, New York State 1980-81, NYSED, Information Center on Education, Albany, p.5.

7. Ibid, p.6.

8. Unduplicated BOCES enrollment counts provided by NYSED, Bureau of Occupational Education Planning and Information; 1979-80 enrollment data, undated; 1980-81 enrollment data dated 11-25-81. BOCES occupational education secondary student registrations actually totalled 68,618 in 1980-81, including students enrolled in more than one course area. (Source: NYSED, Basic Educational Data Service, February, 1982.)

9. It is normal practice for BOCES to charge a single rate for all occupational programs they offer even though some of those programs may be more costly than others.

10. In 1982-83, for example, the Rockland County BOCES projects a tuition rate of $3493 per occupational student and Suffolk 2 BOCES projects only $2250, both New York City Metropolitan area BOCES. (According to John Gormley, Assistant Superintendent, Nassau BOCES, in conversation Feb. 12, 1982).

11. Component school districts also receive excess cost aid for handicapped children (separated from BOCES aid in 1980) and building aid against their contribution to the debt service of the BOCES. Neither of these are being considered in this analysis.

12. Total district expenditures include that district's portion of total services, based on usage. In addition, a portion of administrative and facility (rental) costs are allocated to all component districts regardless of usage. Instead this is based either on relative wealth (true property value) or size (weighted average daily attendance). BOCES Boards select one or the other

II. NOTES (cont.)

method which then applies to all component districts. Most BOCES have selected the property wealth measure.)

13. Analysis of "1980-81 BOCES Aid Year," an office document prepared by the NYSED Division of Educational Finance, State-Aided Programs, compiled from BOCES General Fund expenditure reports, revealed that 19 BOCES out of 44 have administrative expenditures over 10 percent of total program costs. The ratio went from a low of 4.7 percent to a high of 21.6 percent, with four BOCES higher than 20 percent and a statewide average of 12.2 percent.

14. Final year expenditure data are submitted by BOCES to the NYSED around August. On that information partial state aid payments are sent out in the Fall but the largest payments are withheld until the Spring of the year following the accrual of the expense. With reviews, audits and adjustments, final figures are not usually available until several months later.

15. A study of BOCES finances found that:

- A wealthy district may receive a higher percentage of BOCES aid than a poor district.
- There is a greater financial incentive for a wealthy district to particpate in BOCES.

(LCER, June 30, 1976, p. 20ff.)

16. Special services aid actually consists of two parts: occupational education, and Computer aid . The focus here is limited to occupational education aid.

17. There is one exception. A 1972 amendment to the Education Law permits Syracuse to participate in BOCES for a limited purpose relating to trainable mentally retarded children. (LCER, June 28, 1976, p.5.)

18. N.Y.C. Board of Education, Office of State Aid, by phone, February 25, 1982.

19. Students on career tracks in agriculture, health occupations, trade and technical education can be counted; students in home economics, distribututive and marketing education and business education can not be. There appear to be two reasons for excluding certain program areas: first the intention of this aid is to offset particularly high cost educational programs and the ones excluded are less costly to operate; and second, upstate school districts tend to utilize BOCES less frequently for the excluded areas, instead offering those programs themselves -- in which case they are not eligible for extra aid. A review of occupational education registrations throughout the State confirmed the trend generally (see Appendix B). However it also revealed that some BOCES do offer, and school districts indeed do get aid for, programs in those other areas. One might speculate that business education will become a high cost area, if it is

II. NOTES (cont.)

not already, as it comes to rely increasingly on high technology.

20. And in 1980, the first year in which the unduplicated count was used, state aid dropped by $2 million from the prior year, from $5.93 million in 1979-80 to $3.9 million in 1980-81. (N.Y.C. Bd. of Education, Office of State Aid.)

21. Ibid.

III. ANALYSIS OF EXPENDITURES AND AID

This analysis is composed of two parts. The first part examines BOCES expenditures and aid attributable to occupational education, and the second part looks at New York City expenditures and aid for vocational education and computes the state reimbursement the city would receive if it were aided as a BOCES. (Appendix C summarizes the methodology employed in the analysis. Sources of data, assumptions underlying computations, and other details are referenced throughout.) In an effort to be current hypothetical N.Y.C. aid is computed for 1981-82 based on 1980-81 expenditures. The latest reliable data available on the BOCES, however, is 1979-80 for 1980-81 aid. (See footnote II-14).

BOCES

In 1979-80 total expenditures for 44 BOCES amounted to $361.3 million. Total expenditures for program services were $317.2 million, $229.8 million when special education programs are excluded. Of this total, $149.1 million were approved for BOCES aid, a ratio of 64.9 percent (See Table 1.) The ratio of approved to total for separate BOCES varied from a low of 40.7 percent (Monroe 1) to a high of 95.6 percent (Putnam-Westchester). There was no readily discernible pattern[1].

Occupational education program costs totalled $86.9 million[2] and attributable rental administrative expenses another $12.1 million[3], a total program related cost of $98.9 million. Approved (aidable) expenses, estimated by using the 64.9 percent ratio, totalled $64.2 million[4].

Total BOCES aid amounted to $105.6 million, 71 percent of approved expenses and 46 percent of total expenses. Based on those ratios $45.5 million in aid was attributable to BOCES occupational education programs.

Table 1

1979-80 BOCES Expenditures and 1980-81 BOCES Aid

	All Programs	Occupational Ed Programs	Oc Ed as % of Total
Expenditures			
Program Services (includes Special Ed.)	$ 317,239,760 [1]	$ 86,868,224 [1]	27.4%
Central Admin.	44,040,829 [1]	12,060,875 [4]	(27.4)
Total	$ 361,280,589 [1]	$ 98,939,099	27.4
Program Services (excluding Special Ed.)	$ 229,832,260 [2]		
Approved (Aidable) Expenses	149,140,120 [2]	64,210,000 [4]	(43.1)
Approved as % Total Prog.(excl.Sp.Ed.)	64.9%		
State Aid			
Regular Aid	99,381,835 [3]		
Facilities Aid	6,215,140 [3]		
Total Aid	$ 105,596,975 [3]	$ 45,463,000 [4]	(43.1)
Aid as % Approved Expense	70.8%	(70.8%)	
Aid as % of Total Expense	46.0%	(46.0%)	

Sources:
1. "1980-81 BOCES Aid Year," NYSED, DEFSAP
2. SA 105 Forms, compiled from files of NYSED, DEFSAP
3. SA 113 Forms, compiled from files of NYSED, DEFSAP
4. Prorated estimate based on percentage

Computed on the basis of 55,727 secondary students who were enrolled in BOCES[5], the BOCES statewide average expenditure and aid per occupational education pupil in 1979-80 were $1775 and $816 respectively.

BOCES aid in 1981-82 will be considerably higher and in 1982-83 even higher due to the increase in the aidable salary limit, from $9,500 to $14,500 to $17,000.

New York City

Two estimates were made of vocational education expenditures in BOCES-comparable programs in New York City, a low and a high one. Because vocational education administration and support services are not isolated within the high school budget, two methods of attributing costs were used. In the narrative which follows the two estimates are presented, separated by a slash (/). Appendices D, E and F detail the computations, data sources and assumptions.

It should be noted that both the high and low expenditure estimates are conservative for the following reasons. Due to unavailability of data, salaries of part-time workers -- other than per diem substitutes [6] -- and equipment costs were not included. Moreover, operations and maintenance and school safety costs were based on 1979-80 figures, the year prior to the base year. Actual costs would have been higher due to inflation (see footnote 1, Appendix H). Moreover, in comparison to BOCES, overall costs are lower because they are computed on a lower base. For example, ninth graders are not included in New York City considerations of approvable students or programs. Business, home economics or distributive and marketing education students are also excluded. All of these may be allowable by BOCES (see footnote III-4). Finally, only courses that met state minimum requirements were included.

In 1980-81 estimated total expenditures for BOCES-comparable vocational education programs amounted to $63.2/67.3 million, $46.8/50.6 million if federal aid is excluded (see Table 2). Of that total about 62 percent, or $39.0/42.0 million, was approvable for aid. Utilizing the 8 mill aid option (see Appendix A) New York City would receive $24.6/26.5 million in aid. Compared to the $8 million the city actually received, the BOCES formula method represents a 309/333 percent increase.

Table 3 shows total per pupil expenditures of $1825/1941 but actual aid of only $230. Utilizing the BOCES aid formula would increase the amount to $709/765.

Table 2

1980-81 Estimated N.Y.C. Vocational Education Expenditures and projected 1981-82 State Aid under the BOCES Formula
(in $000)

	Total		Approvable		Approvable % of Total	
	Low Estimate	High Estimate	Low Est.	High Est.	Low Est.	High Est.
Expenditures						
Reimbursable Prog.	$ 13,500	13,500	-	-	-	-
Tax Levy Total	49,750	53,751.5	39,010	42,049	78.4	78.2
Total	63,250	67,252	39,010	42,049	61.7	62.5
State Aid						
1. 8 mill option (x .6301)			24,580	26,495		
2. Aid ratio option (x .4436)			17,305	18,653		
Actual Aid			$ 7,962	$ 7,962		
As % of Expenditures	12.6%	11.8%	20.4%	18.9%		
Difference			$ 16,618	$ 18,533		

Source: Appendices D and F

Table 3

1980-81 Expenditures and 1981-82 State Aid Per Pupil (Actual and Projected) for Vocational Education in New York City

	Total (in $000)	Per Pupil (based on 34,651)
Total Expenditures		
Low	$ 63,250	$ 1825
High	67,252	1941
Approved Expenditures		
Low	33,037	953
High	35,433	1023
State Aid (8 mill option)		
Low	24,521	709
High	26,432	765
Actual Aid	7,962	230

III. NOTES

1. NYSED, Division of Educational Finance, State-Aided Programs (DEF,SAP), SA 105 forms submitted by BOCES and summarized by the DEF SAP on an office document entitled "1980-81 BOCES Aid Year."

One might expect BOCES in higher cost-of-living areas to have lower approved to total ratios because of the necessity for them to pay higher salaries, which, with a $9500 aidable limit, would have a larger portion of disallowed costs. The ratios of the seven BOCES in the N.Y.C. metropolitan area do not show a pattern which bears out that expectation:

Nassau:	76.9%
Putnam (& N. Westchester):	95.6%
Rockland:	81.0%
Suffolk 1:	49.1%
Suffolk 2:	50.4%
Suffolk 3:	48.1%
Westchester (Southern):	49.8%

2. The broadly held supposition that occupational education programs use a disproportionately large amount of space was supported by Operation and Maintenance (O & M) expenditures reviewed during this analysis. While all BOCES O & M costs totalled $28,268,466 ("1980-81 BOCES Aid Year") O & M charges to Oc Ed programs amounted to $15,830,811 (compiled from Form SA 111, Schedule 5, from the files of the NYSED, DEF,SAP), 54.9 percent of the total as compared to 27.4 percent of total program costs.

3. Central administrative costs include all central office functions and rent. Central administration, as distinct from clearly program related administration (such as oc ed supervisors, staff inservice costs, postage, operation and maintenance, etc.), includes costs such as those attributable to the BOCES superintendent, the BOCES board, business office operations, public relations, planning, and other central office staff, as well as rent. The BOCES superintendent also serves as superintendent for all dependent school districts in their region. Although this function is not directly chargeable to recipient districts as a service (and thus comes out of administration), it is a relatively minor function. With respect to occupational education, the greater use of space (rental costs in districts which rent) is likely to more than compensate in considerations of proportion of administrative costs.

4. With the exception of excess salaries, virtually every oc ed expense is aidable: equipment, attributable operations and maintenance, program related transportation (whatever is not covered by transportation aid), fringe benefits in their entirety, etc. Occassionally the NYSED Office of School District Organization, which reviews and must approve all program requests before a BOCES may offer a service, may disallow a particular expenditure (use of a consultant, for example) but that is reputedly rare.

III. NOTES (cont.)

5. In 1979-80 there were 55,727 secondary students and 45,728 adults enrolled in BOCES occupational programs, a total of 101,455 enrollees (according to an unduplicated enrollment count by the NYSED, Bureau of Occupational Education Planning and Information). It is difficult, however, to determine the cost and aid per student. The adult group includes veterans who were aidable, students who paid their own tuition, students in federally funded programs, the costs of which may have been excluded from the expenditure figures presented above, and other complicating situations. One may safely assume that all secondary students are included in the expenditure and aid totals, but how many adults are also aided is impossible to know.

On the other hand, judging from tuition rates which BOCES charge component districts for secondary level students (in the range of $2000 to $3500 for half a day in 1982 -- see footnote II-10), it would seem impossible for actual costs to be much lower. That would mean that adult students' tuitions were subsidized, an illegal situation. The subject needs more research.

6. Paraprofessionals and school aides, included in this category, are mostly paid with federal funds. Thus, this item of expense would not be large.

IV. CONCLUSIONS AND RECOMMENDATIONS

New York City and BOCES Aid Compared

By any measure the state aid which New York City receives for vocational education is shockingly low. Actual aid in 1981-82 represents only 20.4/18.9 percent of approvable expenditures, substantially less than the 36 percent which the very wealthiest non-city districts are entitled to receive under current law. The occupational education portion of special services aid to New York City constitutes a definite improvement over aid in the prior year. In 1980-81 New York City received only $3.9 million, six percent of total vocational education expenditures and only 11 percent of approvable expenditures (see Appendix H). The formula changes which resulted in that increase, however, were accompanied by simultaneous changes in the BOCES aid formula: namely, the 1981 increase in the aidable salary limit from $9,500 to $14,500. Thus, the at-first glance impressive increase of 100 percent in New York City aid for vocational education which amounted to an additional $4 million was matched by a conservative estimate of $9 million more aid to upstate districts participating in BOCES.[1]

The $16.6 to $18.5 million additional aid which New York City would receive under the BOCES formula, while a large amount, would represent only about 30 percent of total occupational education aid.[2] At that level it would still fall short of other measures of New York City's program in comparison to the rest of the state. For example, New York City's vocational education secondary students registered in the four most costly occupational education areas (the same areas which are approvable for New York City special services aid) constitute nearly 47 percent of the total for the state. The BOCES, by contrast, serve only 31 percent of that total.[3] (see Appendix B.) Similarly,

New York City approvable vocational education expenditures (conservatively estimated) amount to approximately 43 percent of the state's total.[4]

Finally, while the ratio of approved New York City vocational education students to BOCES occupational education students in 1980-81 is 62 percent,[5] the ratio of projected New York City to estimated BOCES aid for 1981-82 would be only 45 percent (and the ratio for actual aid is only 14 percent!)

There are three basic differences between the two formulas which account for the large disparities in aid (see Appendix A). The first is that BOCES aid is based upon actual approvable expenditures; Special Services Aid is calculated as a share of a fixed ceiling amount (now $1650 per pupil). Second, city aid depends upon student attendance; BOCES aid is based on costs regardless of either attendance or enrollment. Finally, and probably most importantly, the average state share in the BOCES aid formula is 49 percent; in the Special Services formula the state share is 20 percent.

Recommendations

We urge that the Special Services aid formula be modified so that it results in equitable reimbursements for vocational education costs to New York City and the other big cities. We do not recommend that the cities be required to join a BOCES, adopt a BOCES arrangement, or compute their aid based on the BOCES formula in order to receive greater aid.[6] The administration record keeping and paperwork to determine BOCES aid is immense.[7] More important, the BOCES structure offers no apparent educational advantage to New York City.

A simpler alternative would modify the existing formula as follows:

First, the maximum allowable cost or ceiling amount to be aided should be adjusted to more nearly reflect approvable expenditures. For 1980-81, it should be approximately $1900. Further, it should be indexed so that it increases

with average statewide cost increases (assuming the salary limit in the BOCES formula is also adjusted to the statewide average). For example, now that the BOCES aidable salary ceiling has been increased for 1982-83 aid, the Special Services ceiling must also be increased proportionately.

Second, aid should be distributed on the basis of approved vocational education enrollment, not attendance. This would also more accurately reflect actual costs.

Finally, the aid ratio should be set at 40 percent. This would be more equitable with the 49 percent average state share of BOCES aid.

This formula, if applied in computations of 1981-82 state aid, would have resulted in $25 million in aid for New York City. Adjusting the formula for equity with the most recent change in BOCES aid would yield at least another $2.1 million.

IV. NOTES

1. The estimate of increased aid to BOCES is based on the 1981 change in approvable New York City expenditures (an increase of 19 percent) when the aidable salary is increased from $9,500 to $14,500 (an increase of 53 percent).

2. Based on assumptions of $55 million aid to BOCES components, $5 million to other cities (compared to about $3 million in 1981-82), and $24.6 to $26.5 million in New York City).

3. Duplicated count of all student registration, NYSED, OEDS. (See Appendix B.)

4. Based on assumptions of BOCES approved expenditures of $76.5 million (1979-80 amount increased by 19 percent), approvable costs for other big cities of $9.5 million, and for New York City, $65 million.

5. For New York City, 34,651 secondary students; for BOCES 55,492 students. (NYSED, OEDS, unduplicated enrollment counts; provided by NYSED, Bureau of Occupational Education Planning and Information).

6. This in no way is intended as a judgment on the advisability of such a system for any city other than New York City. Syracuse, for example, has had an interest in developing further linkages with BOCES.

7. Aside from program accounting which would be costly for New York City to implement, the system is based on annual SED approval of every course (through "COSERS"), and itemization of every full and part-time staff person and salary connected with the program -- so as to determine excess salaries. In addition, New York City's system of comprehensive academic as well as vocational-technical high schools would require reorganization so as to be compatible with BOCES.

APPENDIX A

BOCES and Special Services Aid

BOCES Aid Formulae:

BOCES component school districts have three ways they may compute state aid based on approved BOCES expenditures. They are:

1. Aid ratio option:

BOCES aid = Approved BOCES expense x School district aid ratio

$$\text{Aid Ratio} = 1 - \left(\frac{\text{District Full Value/RWADA*}}{\text{State Average Full Value/RWADA**}} \times .51 \right)$$

* RWADA means resident weighted average daily attendance.
** For 1981-82 aid, the state average was $80,800.

2. 8 mill option

$$\text{BOCES aid} = \text{Approved BOCES Expense} \times \left(1 - \frac{.008}{\text{school district Full Value Tax rate*}} \right)$$

3. Save Harmless option

BOCES aid = State aid in 1967-68*

* If school district portion of BOCES expenses in 1967-68 were greater than in the current year, the aid is pro rated (i.e. current year expenses divided by 1967-68 expenses).

The aid ratio option, which results in greater aid for school districts with lower property wealth, carries a minimum ratio of 36 percent, maximum of 90 percent, and an average state share at 49 percent. The higher the school district's property tax rate, the higher its aid under the 8 mill option. Not many school districts now use the save harmless option (only about $500,000 were distributed through this provision, according to the N.Y.S. Division of the Budget Education Unit, Feb. 17, 1982).

Aid is paid based on prior year expenditures.

Appendix A

Special Services Aid for Occupation Education

State aid in 1981-82 to New York City for Occupational Education was based on the following formula:

Occupational Education Aid = $1,650 x Aid Ratio x RWADA

RWADA = 1980-81 Occupational Education students* x citywide average daily attendance rate

$$\text{Aid Ratio} = 1 - \left(\frac{\text{Full Value/TWPU}^{**}}{\text{State Average}^{***}} \times .8 \right)$$

* Only occupational education students in grades 10-12 in four approved areas of vocational education (business education, home economics, and distributive and matching education are excluded).

** TWPU means total wealth per pupil unit. In 1981-82, this figure for New York City was $75,081 (according to the Office of State Aid, New York City Board of Education, 2/25/82, by phone). Previous to this year, this pupil count was RWADA which used lower pupil weights.

*** For 1981-82 aid, the state average was 72,700.

APPENDIX B

OCCUPATIONAL EDUCATION REGISTRATIONS FOR 1980-1981

Occupational Program Cluster	BOCES	Upstate (excluding BOCES)	N.Y.C.	Total State	BOCES (Registers as % of Total)	N.Y.C. (Registers as % of Total)
Agriculture	4,676	9,486	2,008	16,170	28.9%	12.4%
Health Oc Ed	7,821	2,094	13,051	22,966	34.1%	56.8%
Technical Ed	661	3,357	9,582	13,600	4.9%	70.5%
Trade Ed	38,590	22,063	53,567	114,220	33.8%	46.9%
Sub Total	51,748	37,000	78,208	166,956	31.0%	46.8%
Business Ed	5,321	324,943	151,613	481,877	1.1%	31.5%
Marketing & Dist. Ed	870	15,719	4,565	21,154	4.1%	21.6%
Home Economics	7,430	168,604	55,597	231,631	3.2%	24.0%
Coop Work Experience	3,249	12,369	3,917	19,535	16.6%	20.1%
GRAND TOTALS	68,618	558,635	293,900	921,153	7.4%	31.9%

Source: N.Y.S.E.D. B.E.D.S. provided February 1982.

APPENDIX C

Summary of Analysis Methodology

The analysis was organized in two parts:

1. As a basis for comparison BOCES expenditures and aid for occupational education were determined, and were then compared to student enrollments to establish unit costs.

2. Using extensive budgetary and expenditure information provided by the New York City Board of Education, costs attributable to aidable vocational education programs in the City's high schools were computed.

A summary of the steps taken for each of these parts follows:

1. BOCES:

Because BOCES are required to maintain extensive data and to utilize program budgeting and accounting, it was possible to determine with considerable accuracy BOCES expenditures attributable to occupational education. Each BOCES reports total expenditures for occupational programs, and chargeable Operations and Maintenance. Since component districts are also reimbursed for administrative and facility costs through the same formula (even though those costs are allocated to the districts on a different basis) comparison of occupational education program costs to total program costs -- after subtracting Special Education since that is aided separately -- enabled the proration of administrative/facility expenses. (These figures are all submitted to the SED on SA 105 and SA 111 expenditure reports.)

State aid, however, is paid on the total of approved costs. The amount of approved expenses attributable to the occupational education portion of each BOCES program was determined by multiplying the ratio of total approved costs to total costs (less special education) times total occupational education costs.

To get the state aid attributable to occupational education, the ratio of total occupational education expenditures to total expenditures (less special education) was multiplied by total aid (from which special education is also excluded). (Total expenditures and total approved expenditures came from lines 6 and 8 respectively of form SA 105, "BOCES Approved Expenditures", submitted by each BOCES to the NYSED. Regular and facilities aid totaled for all component school district in each BOCES came from Form SA 105.)

Unduplicated enrollment data were provided by the NYSED Division of Occupational Education Planning Research and Evaluation.

Due to data availability the analysis of BOCES aid is based in 1979-80 expenditures for 1980-81 aid.

2. New York City

Where BOCES compute allowable costs by subtracting from total expenditures certain disallowables (such as excess salaries, federal funds and other income which would not be part of a district's tax levy effort) New York City expenditures attributable to approved vocational education programs were constructed based on documented tax levy allocations. Federal monies, not aidable, were added after to determine total program costs.

Expenditures for 1980-81 were collected. These were then used as the basis for aid computations for 1981-82 and for rough estimates of aid in 1980-81 as well (see footnote III-6).

Extensive notes on sources of data, assumptions, and computations for New York City total and approvable vocational education expenditures can be found in Appendices D and E.

Finally, in contrast to BOCES component districts, New York City's aid ratio must be imputed. Total tax levy contributions to the Board of Education's budget are determined by subtracting various items (such as state aid, impact aid and other federal grants, interfund transfers, etc.) from the total expenditures. This amount (local effort) is then compared to the total taxable citywide valuation. (Figures were provided by the Bureau of State Financial Aid, New York City Board of Education.) (See also Appendix F.)

APPENDIX D

Estimate of Expenditures for Vocational Education Programs in N.Y.C. High Schools 1980-1981 School Year (in millions)

	Source Notes	Total Expenditures Low Est.	Total Expenditures High Est.	Approvable Expenditures * Low Est.	Approvable Expenditures * High Est.
A. Personnel (Tax Levy)					
-Full-time Staff	1	$26.154	$28.711	$16.124	$17.807.5
-Per Diem Substitutes	2	.248	.344	.164	228.7
Total		$26.402	$29.055	$16.288	$18.036
B. Benefits (at 42%)	3	11.089	12.203	11.089	12.203
C. O.T.P.S.					
-Per Register	4	.346	.346	.346	.346
D. Operation & Maintenance					
-(at $470/student/2)	5	8.143	8.143	8.143	8.143
E. Other					
-School Safety & Security (at $28/student/2)	6	.485	.485	.485	.485
-Center for Career & Occupational Ed.	7	.380	.380	.380	.380
Sub Totals		46.846	50.613	36.732	39.594
F. Central Administration (6.2%)	8	2.904	3.138	2.277	2.455
Total Tax Levy Exp.		49.750	53.751	39.010	42.049
G. Reimbursable Programs (Federal)	9	13.500	13.500	-	-
Grand Total**		$63.250	$67.252		

*Approvable Expenditures are those costs which would be state aidable if incurred by a BOCES.
** Totals may not add due to rounding.

Appendix D

Notes and Sources

1. Source: Appendix E. For total expenditures total units are multiplied by $21,850. For approved expenditures, total positions are multiplied by $14,500.

2. Source: Appendix E. For approved expenditures, the total amount is multiplied by .664, the ratio of approved to total expenditures for full-time staff.

3. BOCES fringe benefits are aidable in full.

4. OTPS (Other Than Personal Services) averaged approximately $10 per vocational education student in 1980-81 and there were 34,651 students enrolled in programs in the four approved cluster areas ("Unduplicated October 1980 Eligible Student Register, Grades 10, 11, 12. For Use as a Basis for Additional Apportionment Aid Claims for 1981-1982," Office of Vocational and Career Education, N.Y.C Board of Education). OTPS funds are allocated by several formulae, some of which provide flat amounts for particular items (e.g. per kitchen) and others of which multiply a dollar amount times a registration factor. The allocation formula, explained in the Comparative Analysis, p.vvi, resulted in approximately $10 per vocational education student, according to the Division of High Schools, Office of Organization and Planning, N.Y.C. Board of Education, in interview, February 19, 1982.

5. The total operation and maintenance (O and M) cost per high school student in 1979-80 was $235. (A Functional Analysis of the 1979-1980 New York City Board of Education Budget, Office of Budget Operations and Review, N.Y.C Board of Education, New York, June 1980, p.13.). Comparable data for 1980-81 are not yet available; however one may reasonably assume they are significantly higher because of the severity of the impact of inflation on the cost of building operations: higher salaries, escalating energy costs, and particularly in the case of New York City, an aged building inventory with high maintenance and repair requirements (see also footnote 1, Appendix H). Building operations are generally fixed, in the sense that they provide little resiliency for cost cutting adjustments. The components of O and M costs include custodial service, maintenance and repair, leasing and rentals (only about 2 percent of the total cost per high school student), and heat, light and power.

The contention of N.Y.C. high school principals and BOCES administrators (in interviews) that vocational education programs are disproportionately expensive with respect to O and M costs (requiring more space per student, consuming vastly more energy, and absorbing more custodial attention due to the larger space and generally messier nature of the functions) is confirmed by an examination of BOCES expenditures (see footnote III-2). Whereas, BOCES Occupation Education expenditures comprised 27.4 percent of their total program expenditures in 1979-80 (based on "1980-81 BOCES Aid Year," an office document prepared by the NYSED, Division of Educational Finance, State-Aided Programs, compiled from BOCES General Fund Expenditure reports), O and M costs allocated by BOCES to their occupational programs reimbursed amount to 54.9 percent of total BOCES O and M expenditures, twice the rate of other programs. (Form SA 111, Schedule 5, BOCES expenditure reports compiled by the research team for this study, February 22, 1982).

Appendix D
Notes and Sources

N.Y.C. O and M expenditures for voc ed therefore are computed at double the average H.S. student rate, divided by 2 because vocational education students, for scheduling purposes, usually average half day.

6. Based on A Functional Analysis, p. 13. Comparable data for 1980-81 are not available. See also note 5, supra.

7. Budget Estimate, Fiscal Year 1981-82, Volume II, N.Y.C. Board of Education, p.158.

8. The N.Y.C Board of Education's approved fixed rate for indirect costs is 6.2 percent.

9. Budget records at the Office of Career and Occupational Education, N.Y.C. Board of Education were reviewed to identify reimbursable programs attributable to approvable categories of career programs. Programs targeted to adults or unapprovable-for-aid vocational areas (such as business education) were excluded. Programs serving approvable and unapprovable areas were prorated. Approximately 60 programs were funded through federal VEA grants and of these programs, grants totalling some $8 million are attributable to approved career areas. An additional six programs (YETP, and various other youth programs) contributed about $5.5 million to approvable voc ed activities. In 1980-81 New York City was allocated a total of $18 million for vocational education (according to EPP Federal School Funding, November 1981 Appendix 1).

Reimbursable funds are noteworthy in considerations of total program expenditures and costs per pupil. They would not affect state aid.

Appendix E

N.Y.C. Board of Education Tax Levy Personnel Allocations for Vocational Education in Approved Subject Areas 1980-81 School Year

TITLE CATEGORY	Notes	Total in City			Attributable to Voc. Ed. (low estimate)			Attributable To Voc Ed (high estimate)			Unit Value [9]	TOTAL UNITS Attributable to Voc Ed	
		Voc HS	Comp/Acad. HS	Total	Voc HS	Comp/Acad. HS	Total	Voc HS	Comp/Acad. HS	Total		Low Est.	High Est.
Full-Time Positions													
Voc. Ed. Teachers of Approved Courses	1	594.9	136.0	730.9	594.9	136.0	730.9	594.9	136.0	730.9	1.13 [10]	826	826
ATR (Full-time Substitutes)	2	21.0	1.0	22.0	21.0	1.0	22.0	21.0	1.0	22.0	1.0 [11]	22	22
TOTAL Voc. Ed Teachers		615.9	137.0	752.9									
(Net H.S. Instructional Teachers-excluding Special Ed)	3	1520.5	8362.86	9883.38									
Low ratio (Voc Teachers ÷ Net)		40.5%	1.64%	(7.6%)									
Medium ratio	4	50%	3.3%										
Machinist Helpers	5	27.0	31.0	58.0	27.0	6.2	33.2	27.0	6.2	33.2	.97	32.2	32.2
Asst. Stock/Stock	5	13.0	50.21	63.21	13.0	10.4	23.4	13.0	10.4	23.4	.5	11.7	11.7
Assistant Principals	6	141.0	807.8	948.8	57.1	13.2	70.3	70.5	26.7	97.2	1.3	91.4	126.4
Guidance Counselors	6	40.0	314.5	354.15	16.2	5.2	21.4	20.0	10.4	30.4	1.16	24.8	35.3
Lab Spec./Tech.	6	15.0	168.0	183.0	6.1	2.8	8.9	7.5	5.5	13.0	.79	7.0	10.3
School Secretary	6	150.7	810.6	961.3	61.0	13.3	74.4	75.4	26.7	102.1	.65	48.4	66.4
School Secretary Intern	6	4.0	40.6	44.6	1.6	.7	2.3	2.0	1.3	3.3	.39 [12]	.9	1.3
Library	6	28.0	194.0	222.0	11.3	3.2	14.5	14.0	6.4	20.4	1.0	14.5	20.4
Other Teacher Time (non-instruct. assignments)	7	202.4	1149.4	1351.8	82.0	18.9	100.9	101.2	37.9	139.1	1.0	100.9	139.1
Principals	8	21.0	79.0	100.0	8.5	1.3	9.8	10.5	2.6	13.1	1.75	17.2	22.9
TOTAL POSITIONS/UNITS							1112.0			1228.1		1197.0	1314.0
PART-TIME POSITIONS (in $000)	13	$488.2	$3039.8	$3528.0	$197.7	$49.9	$247.6	$244.1	$100.3	$344.4			

Appendix E

Notes and Sources

1. Based on compilation of equivalent teacher time in ten period courses in the four approved cluster areas (Agriculture, Health, Trade, and Technical Education) through review of files on High School Organization Reports, Division of High Schools, Office of Organization and Planning, N.Y.C. Board of Education (hereon after DHSO OBP). (Review conducted February, 1982; see also Appendix G.) Approved courses were determined through review of titles by the Office of Vocational and Career Education, N.Y.C Board of Education.

2. Allocation of ATR teachers (full-time vocational education teachers who function as substitutes) according to information supplied by High School Office of Organization and Budget Planning, in interview, February 11, 1982.

3. Comparative Analysis: The Organization Of High Schools, 1980-81, Division of High Schools, N.Y.C. Board of Education, New York, p. 33.

4. High ratio is based on interviews with various H.S. principals and other school administrators regarding actual staff development and time devoted to vocational education program activities.

5. Citywide H.S. totals from Comparative Analysis, p. 19. Allocated at 100 percent in vocational/technical high schools and 20 percent in comprehensive/ academic high schools, based on information supplied by DHSO OBP.

6. Citywide H.S. totals from Comparative Analysis, p.19. Allocated to vocational education based on high and low ratios.

7. Ibid., p. 33. allocated to vocational education based on high and low ratios.

8. One principal counted for each Vocational/Technical H.S. and Comprehensive/ Academic H.S. (the ten alternative High Schools in N.Y.C. serve few vocational education students and are excluded), and allocated based on high and low ratios.

9. For purposes of budgeting and allocating personnel throughout the N.Y.C. school system, the N.Y.C. Division of High Schools has developed a system for converting an average teacher salary, which changes annually, to average salaries for other positions. In 1980-81 one unit was figured at $21,850 (exclusive of benefits). Unit value conversion rates are from "Directions for Scheduling School Budgetary Capability," DHSO OBP, December 19, 1980.

10. Although the average N.Y.C. teacher salary in 1980-81 was $21,850, vocational education teachers tend to earn at the top of the scale due to seniority and prior work experience. This tendency seems to hold throughout the state. The NYSED, Information Center on Education annually collects data on professional salaries. That Office's Bureau of Statistical services very kindly provided a teacher count and median salary at the 50th percentile for each of eight areas in which vocational educational programs are clustered for all 44 BOCES and the five Big Cities. The data indicate that the median salary

for 838 NYC vocational education teachers in the four approved cluster areas was $24,741 (no different than the median for NYC vocational education teachers if all eight cluster areas are considered).

A random survey conducted by the research team for this study of the salaries of 78 NYC vocational education teachers in 26 high schools similarly revealed a median salary of $24,741 and an average salary of $24,488.

11. Even though ATR teachers hold vocational education licenses they are assumed to be of lower seniority than the average vocational education teacher. Thus, a unit value of 1.

12. In 1981-82, salaries of BOCES staff were aidable up to a limit of $14,500. In NYC the average as well as low salaries for most positions was well above that amount with few exceptions. The only clear exceptions are School Secretary Interns, whose average salary in 1980-81 was $8,522 (based on a unit of value of .39). Pro rating that amount into total allocated positions for this title results in a reduction of only .3 positions and therefore the reduction has been disregarded.

13. Division of High Schools, "Statement of Expenditures, Encumberances and Available Balance" for Fiscal Year 1981, updated as of January 31, 1982, pages 282, 283, 293, and 294. Includes substitutes for the following positions: School Secretary/Intern, Industrial Arts Technician, School Secretary, Lab Specialist, Teacher Replacement, and Teacher, Regular Grades. Total dollars allocated by low and high ratios.

Appendix F

New York City Aid Ratio Data For BOCES Aid Formula
(in $000)

8 Mill Option

	For 1981-82 Aid *	For 1980-81 Aid *
1. Imputed Tax Levy (during prior year)		
a. Total Education Expenditures	$ 3,040,335	2,817,272
b. Revenues	1,228,109	1,104,246
c. Imputed Tax Levy	1,812,226	1,713,026
2. Property Valuation	83,791,797	79,519,033
3. Computed Tax Rate (line c ÷ 2)	.0216	.0215
4. Districts Share (.008 / line 3)	.3699	.3714
5. State Share using 8 mill basis (1-line 4)	.6301	.6286

Aid Ratio Option

6. a. District Full Value/RWADA	$ 88,155	$ 83,322
b. State Average Full Value/RWADA	80,800	74,100
c. line 6a ÷ line 6b	1.0910	1.1245
7. line 6c x .51 (District Share)	.5564	.5735
8. 1 - line 7 (State Share)	.4436	.4265

* Source: Bureau of State Financial Aid, N.Y.C. Board of Education.

Appendix G

Equivalent Teacher Time: Ten Period/Week Voc. Ed. Courses in N.Y.C. High Schools [1] Fall, 1980

	Vocational Technical H.S.		Comprehensive/Academic H.S.		Total	
	All Courses [2]	Approved	All Courses [2]	Approved [3]	All Courses [2]	Approved [3]
Brooklyn	201.2	188.4	57.16	44.56	258.36	232.96
Queens	135.0	134.6	42.8	31.2	177.8	165.8
Manhattan	167.0	163.0	102.64	42.0	269.64	205.0
Bronx	100.9	85.3	16.8	10.0	117.7	95.3
Staten Island	24.0	23.6	10.2	8.2	34.2	31.8
Totals	628.1	594.9	229.6	135.96	857.7	730.86

Source: High School Organization Reports, Division of High Schools, Office of Organization and Planning, N.Y.C. Board of Education.

Notes:

1. Does not include ten-period vocational education courses in the 10 N.Y.C. Alternative High Schools.
2. Includes all ten-period careers courses for students in grades 10-12.
3. Approved courses are limited to career oriented courses in the areas of agriculture, health occupations, technical and trade education. Exploratory courses, other than pre-vocational, and courses in business education, home economics, marketing and distributive education, and cooperative work experience are excluded.

Appendix H

New York City/BOCES Comparison, 1980-81

In order to compare the aid New York City would receive under the BOCES formula to upstate school districts participating in BOCES, rough estimates of 1980-81 aid were computed. Due to data availability and the scope of this study, 1980-81 expenditures were reworked utilizing an aidable salary limit of $9,500 instead of $14,500. A cursory examination of some of the data elements suggests that total New York City vocational education expenditures were of the same order of magnitude in 1979-80 and 1980-81.[1]

Table 4, which summarizes 1979-80 approvable expenditures and 1980-81 aid to New York City using the 8 mill option, indicates New York City would have received approximately $22.4 million in aid, $17.5 million or five and one half times more than actual reimbursements. That would have amounted to $651 per vocational education pupil in contrast to the $117 in aid actually received.

Even then, the New York City amount of aid for 1980-81 projected under the BOCES formula would have been considerably less than the statewide BOCES average: 33 percent of total expenditures as compared to a statewide average of 46 percent, and New York City approvable expenditures constitute only 52 percent of its total expenditures as compared to 71 percent for the BOCES. Actual aid New York City received represented only six percent of total and 11 percent of approvable expenditures.

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1. Certain elements of expense increased from 1979-80 while others decreased. For example, full-time staff positions throughout New York City high schools decreased as is shown by the following table:

Full-Time Tax Levy Positions in New York City High Schools

	1979-80	1980-81	Change
Total non-instructional positions	3,007	2,935	-82
Total instructional teachers (net)*	10,372	9,883	-489
Total instructional (in Voc. Tech. H.S.)	1,646	1,521	-125

*(Net excludes special education teachers)

Source: Comparative Analysis: The Organization of High Schools, 1979-80 and 1980-81, Division of High Schools, New York City Board of Education

Figures on equivalent teacher time in approved vocational education courses were not collected for 1979-80. Thus the percentage of the above positions attributable to approved vocational education programs were not calculated.

[The severity of the budgetary cutbacks is clear from the fact that the above tabulated position declines occurred at the same time as student registers increased. According to the Comparative Analysis, total high school students --

excluding special education -- increased by 15,600 (from 247,566 to 263,182); Voc/Tech H.S. students increased by 2,300 (from 31,964 to 34,269). And the unduplicated count of approved vocational education students increased by 1,300 (from 33,355 to 34,651), according to the Office of Career and Occupational Education, New York City Board of Education.]

Although approved vocational education expenditures for staff would have been lower in 1980-81, the Operating and Maintenance (O and M) costs and school safety costs per student would surely have been higher (figures for 1980-81 are not yet available). According to the Functional Analysis prepared by the Office of Budget Operations and Review for 1978-79 and 1979-80, high school O and M costs increased by $34 and school safety by $4 in the one-year period. If the costs increased a similar amount to 1980-81, the added expense attributable to vocational education would be about $2.5 million.

Appendix H

Table H-1

1979-80 Estimated New York City Vocational Education Expenditures and Projected 1980-81 State Aid Under the BOCES Formula
(in $000)

	$ [1]	$/Pupil [2]	%
Total Expenditures	$65,000	$1,950	
Approvable Expenditures	34,000	1,020	
Approvable as % of Total			52%
State Aid: 8 mill option (x .6286)	21,372	641	
Aid as % of Total Exp.			33
Actual Aid	3,901	117	
As % of Total Exp.			6
As % of Approv. Exp.			11
Difference	17,471		

1. Source: Appendices D and E with personnel estimates based on aidable salary limit of $9,500.

2. Source: Based on Fall, 1979 unduplicated pupil count of 33,355 (Office of Career and Occupational Education, New York City Board of Education).

Appendix H

Table H-2

Comparison of BOCES and New York City Projections on Expenditures (1979-80) and Aid (1980-81)

	BOCES[1]	NYC Projected Aid [2]	NYC Actual Aid [2]
Approved/Approvable as % of Total Expenditures	65%	52%	52%
State Aid as % of Total Exp.	46	33	6
State Aid as % of Approved/ Approvable Expenditures	71	63	11

1. Source: Table 1 of text.
2. Source: Table H-1.